1. Mutat Res. 2006 Apr 11;596(1-2):76-80. Epub 2006 Feb 2.

Single strand DNA breaks in rat brain cells exposed to microwave radiation.

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This investigation concerns with the effect of low intensity microwave (2.45 and 16.5 GHz, SAR 1.0 and 2.01 W/kg, respectively) radiation on developing rat brain. Wistar rats (35 days old, male, six rats in each group) were selected for this study. These animals were exposed for 35 days at the above mentioned frequencies separately in two different exposure systems. After the exposure period, the rats were sacrificed and the whole brain tissue was dissected and used for study of single strand DNA breaks by micro gel electrophoresis (comet assay). Single strand DNA breaks were measured as tail length of comet. Fifty cells from each slide and two slides per animal were observed. One-way ANOVA method was adopted for statistical analysis. This study shows that the chronic exposure to these radiations cause statistically significant ($p<0.001$) increase in DNA single strand breaks in brain cells of rat.

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